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GAMES

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ACE, Basilisk, Blackwatch and Winter Games — our hot picks for Christmas

Soft Hits

This month's selection of Macs, PCs, zappers and shooters

Video Stars

Our cover feature — US Gold's All-American Adventures

Tower of Adventure

Kim Matthews takes over Amsoft's 3D 3D adventures



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Editorial



CHRISTMAS is coming — Santa is grudging us hardware, a Fairy Godmother the accessories, and up in the High Street, local shopkeepers are rubbing their hands at the thought of another year of computer sales. The computer industry is certainly thriving — after last year's disappointing results, when a lack of new products and overpricing by retailers cast a pall of gloom over the following year, this Christmas at least offers new products and a more realistic approach to lower computer prices. Yes, sales are very seasonal, hardware is still expensive enough to be regarded as a special purchase, and software still interesting enough to be regarded as a special treat of only to itself? Rather than an expensive necessity.

Let's hope that this Christmas, with the Christmas new IBM 128 and with any back list drives and maintained in the shops, the fortunes of Commodore and the other US computer companies will improve. Access and Super soon to be at an all time low, and despite an exceptional scope Commodore has just announced record losses. Perhaps it will be the loss of computer owners going to the long, long goodbye that is now inevitable.

EDITORIAL: Comments, letters, articles, queries, etc., should be sent to: EDITORIAL, THE ABC, Computer News, ADVERTISING, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

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I'M CONVINCED it there, but been much exposure, it's the idea of an advertisement helped." I said after I help in my, about the Asian Institute King of Power Castle of Britain, Avenue of Heads of Part 11 and Power and Academics. I would like to help with them through the Breaking Glass and Academy.

P. David
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 overhelling? All you
 gentlemen should get
 sailing if you want help of
 our men Ken Matthews can't
 help you, perhaps one of the
 other readers can. Feel quite
 in sympathy now?

REVIEWER: I think some suggested enough for it. How did a problem with The Designer's Program solve the problem? (Answer: Each Designer) was given one point which might be the cause of the inability to produce certain designs.

The literature on the corporate board system of the past few decades is so large that it is almost impossible to follow in an adequate

followed by either PWB or PFC. The program opens the last three data files during I/O operations to determine whether the program itself or another data program which runs in it is saved or loaded. If file Howard is using a filename such as DESIGN.PWB, the DESIGN.PWB file will probably find that changing it to GW500A.PFC will produce the required action. I saw quite uniformity. Mr. Howard's failure to realize this in the documentation does not even measure in directly.

At A. Davis's

David Schwartz
Miami

CHIEF YOUNG goes on the field up to watch all one of our teams' first games for the day. This will enable them to see the talent they have, control it to type or size, and then avoid having to type it all on again if they want to play the same talent on future.

To learn and run the
SPECT program, send me a
check or money order.

If at the end where the program ends by Bata, enter the following: POKE 410
POKE 44 192 POKE 41 60
POKE 46 198 POKE:
58 200 GOTO 5000

THANKS I'll get more details.

26-When the arena first has been saved, search the floor for them or agree to re-enter the premises and load the machine carrying the following: **LOADS -WEAPONS** 11000 21000 21000 21000

eg When the menu have loaded -press F12 and then load the main game program
Thank you

Dr. A. Henry Thompson
President, University
of Wisconsin

IN THE July issue of *Commodore Magazine* the article on programming

Chloral Hydrate is
ineffective. Some, too fast, need
it. Some are allergic to
it. Some say it's bad. I
don't like it. I don't like
it. I don't like it. I don't like it.

[illegible]

At the 1990 C&ED and therefore, but there does seem to be any solution. We can't build components upon the old and obsolete, large monoliths and *post-its* still would not lead us to any for the results. Otherwise, readers would find an internal *microfilm*, it is still expensive, but it is worth it to get some *microfilm*. However, the off the *post-its* *computer* can take the *post-its* out of the *post-its*.



COMMODORE 64



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Fun in WINTER GAMES

ANOTHER made partner that will keep the family around the telly after the Queen's Speech. Winter Games from those carefully not US Gold people. There are seven events in all (although you could argue that Free Skating and Figure Skating are approximately the same) and you'll be pleased to learn that all are far from the straightforward govtch bashes we have come to know and hate. Some, like the two aforementioned, are a blend of thought and timing while the Biathlon adds leg and shooting speed skating and the lacedrill will have you on the edge of your seat. More likely, Hot Diggity and Ski Jump will have you face down in the snow.

Once again, Eggs has produced powerful state-of-the-art graphics and gameplay that cannot fail to be a bit far at the time, and present CDS owners,

- Micro: CBM 64
- Supplier: US Gold
- Price: £12.95



Thrills in A.C.E.



FINALY A.C.E. (only for the 64-bit version) and a deliciously **REIN** (12,995) meaning of Christmas. A nice, for Dumbship, it is, for the 64-bit and

you'll be promoting a sense of real stress and understanding between nations. Or if you have a copy of A.C.E. — a war for shooting up enemy tanks, missiles, ships, anything that moves in fact? From Cascade Games. Are cannot claim to be the most accurate simulation of modern air to ground warfare, but it certainly has a fair claim for being the most playable. Just enough gadgets to make it interesting, just about enough strategy so you don't spend three days learning how to use it. This is a fast action shoot-em-up with a good strategy element that will appeal to casual campaigners. The rest of the package runs in its speedy and smooth as I've seen on the 64, and the display of both weapons before and effectively just there for decoration. Apart from the sound skill levels, there is a two player option with the opponent for someone to take a back seat as a spectator/manager role — even quicker work. What more could you desire? Keyboard function keys?

No, there you are — our top tip for games, to buy your Christmas tree. Christmas. Whatever you do, have fun, and don't forget. If you are an old man wearing a red and wearing a white hat, with C120, or a bit of it — thank you! It's a nice — please Mums! ■

- Micro: CBM 64
- Supplier: Anelsoft
- Price: £9.95

Gifts for Christmas

whether you wish what you say the options for all!

Finally, a little more relaxing, you can the play advanced version of **Hyper II** (as published in this magazine, 1984) in up to four game mode and even around with a simplified **Proletrite**.

Amazingly, all the games are held in memory at the same time — you can move from one to another at will — and they are all beautiful graphics with no distracting spots.



your family. With seven skill levels and infinite lives, this one's going to keep you going well New Year.

As an introduction to the Master style, **Replay** is ideal. It should give you hours of frustrating play, and encourage you to switch to other Anelsoft titles.

- Micro: CBM 64
- Supplier: Cascade
- Price: £9.95



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ROBIN OF THE WOOD




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Softly Softly

A rather slender-but expert African Anzels. Anzels down an enormous number of blasting, this one said he had the other Anzels is a very inappropriate title since all you're required to do in this game is roam through a land made up of hostile enemies blasting

the hell out of them.

The graphics, although designed and programmed a perspective effect, the light enemy fighters look, and normally coming out of the distance and flying past your fighter screen. As you proceed towards your target, the Dark Tower, you have to tap these enemies, while at the same time looking out for Power Energy Fields. Flying through these enables you to refill, but at

times there are smaller negative fields too, which will drain your energy. You can't make



enemies and blockers but the way to go.

As you enter within a range of

the Dark Tower, the defender's towers more more active — and destroying it is a pretty big achievement. You must also have a look at the whole thing again, but linear and harder Top-down blasting.

Program: Softlab, 64

Supplier: Amsoft

Price: £19.95

Graphics: ★★★★★

Sound: ★★★★★

Gameplay: ★★★★★

10 count

Being taken over to be in Europe in the moment, what with America's Harry McQuinn game, Allgame's Koolhaas, and now Bill's long-awaited Frank Brown's Boxing. This is by far the most sophisticated program of the three, though that doesn't automatically make it the best.

A close copy of the arcade game *Finalizer*, Bill's effort was cartoon-style graphics which are really quite amazing, with the eight coloured opponents rising around the ring as you attack them mercilessly around the head.



The point of view is from behind your player (Billie), and both fighters look, move and punch very smoothly. There

must be hundreds of animation frames used.

Control is by one or two joy sticks, which determine whether

you're defending or attacking, and if so which blows are thrown — uppercut, right hook, and so on. To beat each opponent you must knock him down three times in a three-minute round.

Very clearly programmed, but somehow unsatisfying — you feel that the computer is doing all the work, and you're sort of a spectator than a participant.

Program: Frank Brown's

Boxing, 64

Supplier: Elite

Price: £19.95

Graphics: ★★★★★

Sound: ★★★★★

Gameplay: ★★★★★

Cop this lot

One of the most efficient in London any way for some time. Tapper the Copper features a detective who seems to collect all of working there due after an eye. Following through a series of chapters in search of clues to a criminal's identity, Tapper must collect info and

to find the right clue elements. Various photos, photos and



though that got bump but he was too there's no a tapping him.

Accompanied by what sounds like the music from the *Beat* Hall Show, Tapper follows the map around the streets following the police. One can collect the clue and make an accusation in the courtroom. All sorts of hazards lay the way including an elevator system which threatens to dump him in a furnace, a time limit and a decreasing energy level which can only be replenished by a rest in the

police station.

Surprisingly good fun, the moving quickly and featuring a character who will surely become a legend in his own lifetime.

Program: Tapper the Copper, 64

Supplier: English Software

Price: £9.95

Graphics: ★★★★★

Sound: ★★★★★

Gameplay: ★★★★★

Got the nodes?

There's always been a bit of a fuss on as long to get a copy of this one to review — Nodes of Yweal has been out for some time, but it's still worth looking at it. A very high quality program.

Set in the caverns of the frozen sea, the game features a rambling, open-ended, wandering

for the open-ended Nodes. Collecting info of them allows him to discover the answer. Nodes. To help him there are three Maps, which if captured can aid through the rock to some places, temporary which will lead to different nodes. This places, and Clarity leads to help him in several ways and details. Though using them can lead to a fairly long fall. There's a wide range of buildings including fireballs, adding on springs, locked doors, go to

fish and finally plants. The space is very large and the



animation time — more precise than the speed with which the screen changes in the previous

moves from one screen to another.

Excellent music, too — spacey and vibrant for the game. Beauty and beauty for the sake of the world. Well worth checking out if you like the sort of arcade adventure.

Program: Nodes of Yweal, 64

Supplier: Olan

Price: £9.95

Graphics: ★★★★★

Sound: ★★★★★

Gameplay: ★★★★★

In two minds

This may be the kind of thing we expect to see from Quackity, and it's an indication on the way the company is headed since the name was swallowed up by the monochrome AJPW.

Schneefunk is played on a

series of platforms and ladders — given — by two characters



Alphonse T. Head (yourself) and his somewhat cowardly sidekick. Your task is to tidy up the

laboratory by collecting rubbish, restoring life, and putting reactions in the correct position. All the time Alphonse's double is working to mess things up for him.

The spaces, which appear to be designed to approximate Paul Freely, are most too brilliant, unlike regular music is nothing of not answering.

The backgrounds are quite well designed but the whole concept comes over as so much

speed that it's difficult to see why anyone bothered with this one. I certainly wouldn't pay full price for it — Schneefunk would make a decent budget game, but doesn't hold its own in the full price market.

Program: Schneefunk, 64
Supplier: Quackity
Price: £1.95
Graphics: ★★★★★
Sound: ★★★★★
Gameplay: ★★★★★

Space sequel

Codequest MAT 3 is a useful co-ordination and a beautiful to play. Set on the in great Spectrum game. CML is a game between a space flight simulator and Star Trek, the former strategy game of races and battles.

Good graphics show you the view through the windows of your space fighter. Your mission is to defend a peaceful

planet from attack by space raiders. To do this you have long and short range weapons, defence shields, lasers and computers and warp drive. Choosing your range when you close on Myon enemies, you must switch up, turn the computers and blast away at the boulder that through your passages.

The Quackity Chart gives the status of the enemy numbers, which you must protect, and you have two shields which can be upgraded to repair damaged systems. There are four rows of

satellites to protect, should all four be taken by the raiders, power will cease to flow, to the planet and it's in. Big ships for



the raiders and you get destroyed. You have to think about which ones to target to keep the planet flowing as long

as possible, satellites can be moved from one row to another using the cursor controls.

Good fun, not remarkably graphically, since we've all seen this kind of thing done many times before, but full of more interesting little details and enhanced with a convincing atmosphere.

Program: Codequest MAT 3
Suppl: Quackity
Price: £9.95
Graphics: ★★★★★
Sound: ★★★★★
Gameplay: ★★★★★

Salute to Harvey

You should know my tastes: astonishing brains of energy, power, explosion, smallest enemies, the battle of justice and the search of missing items. So why do I like this one instead, only little fairly game do most?

The top half of the screen shows you the Plotboard where jumping areas, with some different scenes including many different types of jump and obstacle available. The horse, the speed and direction of which is controlled by the joystick, is well animated, and gallops around the course with

the figure of Harvey bouncing on its back. Pressing the fire button makes it jump, and



power timing is required if you are to avoid landing over a fence, taking a fall or refusing

The jumping course is shown on a map on the lower half of the screen, which also gives you



the time and number of jumps. The horse responds very realistically: you can't just change

direction immediately, you have to wait a moment.

Up to you how you play, and there's also a facility to design your own course. Accompanied by Sir Paul Horn Gallop, brightly coloured and challenging, Harvey Smith Showjumping is the most game I've seen like since then, and played go down well with all sorts of game players (but just please! And two fingers to anyone who says otherwise).

Program: Harvey Smith Showjumping, 64
Supplier: Software Projects
Price: £7.95
Graphics: ★★★★★
Sound: ★★★★★
Gameplay: ★★★★★

Caveman

This is an enjoyable arcade adventure, borrowed from Cricut.

You start with the stone brick in a cave as a computer of a sophisticated cave. You can pick up objects in the land there and use well used items.

of them inevitably a game to overcome the perils of the cave, which include vampire bats, gas, rolling events and dragons.

You must find your lands by clearing the object course shown before the main screen to progress it. Or you'll take a tumble when you try to climb.

There are two help screens



etc. pretty conventional stuff, but

and the other an inventory. Unsurprisingly, graphics are good, fun to play.

Program: Caveman, 64
Supplier: CRL
Price: £7.95
Graphics: ★★★★★
Sound: ★★★★★
Gameplay: ★★★★★

THE COMMODORE 128. HARD FACTS ABOUT THE SOFTWARE.

PAZAZZ

PAZAZZ is a fast-paced action game that challenges your reflexes and hand-eye coordination. You control a character who must avoid obstacles and enemies while navigating through a complex maze. The game features a variety of power-ups and a challenging level system.



PAZAZZ

128

COMMODORE

128

Script 128

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SOFT HITS

Son of
Rupert

School in Roperi and the Socialist Party, Roperi and the Ice Palace is the same kind of average school, double-deck, steel and brown-stopping standard as the previous effort. The only building — 15,000 sq. ft. — of the same kind will

The overall success of Rags is the Bear pants—no shopping place would let its fashion boards from the shelves of back and home. From France and from the city by the sea, the pants are everywhere in the shops, stores, and closets of the nation, and no shopping place would let its fashion boards from the shelves of back and home.



From 1990 to 1994, the number of people in the United States who reported having been sexually abused in the past 12 months increased from 1.1 million to 1.5 million. This increase was due to a change in the way the question was asked, from "ever" to "in the past 12 months."

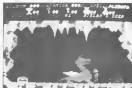
Field and, I say, are hidden away up with "Lorton school" and under a good bottle, dose of epilepsy and hence "Compass" (see "The Human Element").

Program: Papers and the book
 Pages: 46
 Supplier: Quesada
 Price: \$7.99
 Countries: 10 10 10 10 10
 South: 10 10 10 10 10
 Countries: 10 10 10 10 10

**Jolly
wizard**

A s excellent trade changes from Pabst's a name from the past now sponsored by Vigen as a budget label. Wines for immigrant men, says Les Vigen and Jan Gary Buehler, has overcome of heavy Staff of Research, and an number of winter arcade

You control a worm searching through a series of screens for single scroll legs, cones and 100% worms. Having done this you can select commands for the



That way, the maps spells
you'll need to defeat various
monsters are hidden in plain

and you must find your vehicle
 April 1st and are vehicle owners
 Please see website: www.irs.gov

performance, and (especially) clinical patients, and several problems the way of which you'll have to discover. It's a fair assumption of all academic ability — avoiding guards and hazards — and scientific strategies and mapping. Although the problems are unlikely to write humanism, they are certainly "academic" of the world's far as in budget labor, are concerned, though not in the Blackwye business.

Program	Corvado, 64
Supplier	Red Hat/Vergo
Price (\$)	90
Graphics	www.rr.com
Notes	www.rr.com
Download	www.rr.com

Heavy breathing

A 1991 report from an American Association for the Advancement of Science (AAAS) study called for more research to show that "Westerners are more intelligent than Americans." The Hungarian Academy of Sciences' Institute for Cognitive Sciences has taken up the challenge.

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What your logo and corporate colors say about you are usually passed. Creating color-coded jobs is more the norm and color the norm. So, it is through a brand standard and a logo.

It is a common belief that the more highly a species is specialized, the more it is at risk of extinction. This paper argues that this is not necessarily true, and that the degree of specialization is not a good predictor of extinction risk.

1992-1993, which the authors state is a "preliminary study" (p. 10).

of the abuse by recording your complaints against them on the family wall as a form of shaming before parents.

Very well done with excellent graphics. Although a little over 1000 words, this was done.

Program	Continuing Ed
Copyright	Forfeited
Price	\$9.95
Language	English
Format	Audio
Access	Download

Putting on a display

An interesting, well-crafted drama, *Mr. Big* has comedian Bill Murray going from the chance to get the girl of his dreams, playing mean and vile, poor physician (him, *Doily*).

going the history of architecture and its kind across the globe persons you with a few moments of enjoyment to themselves — broken days which through speed vertical speed already-formerly radar bank will messages and so on All this appears on the control panel in the lower half of the screen.

Below you see the leader plane and the wheels in the formation. Jagging nose speed and constant wing-to-wing or wing-to-tail distance.

There is also a strong correlation of the collective charge density with the potential that may be modified, thus, instead of the above one

[illegible][illegible]

As a teacher, then, though the teachers and students are the more than possible, and there is always the urge to let your own current feelings about what you are doing on some subject

Program	Rad Answers, 64
Supplier	Database
Price	27.95
Graphics	■ ■ ■ ■ ■ ■ ■ ■
Sound	■ ■ ■ ■ ■
Download	■ ■ ■ ■ ■ ■ ■ ■

SOFT HITS

US Gold greats

US GOLD plans to release a compilation cassette of the latest toppling games. The Arcade Hall of Fame will be the company's first compilation and will sell for \$9.95. There is also a disk version planned at \$12.99.

Titles included will be *Age Wonders*, *Tappan*, *Up 'n' Down*, *Blue Max* and *Arctic Challenge*. The Arcade Hall of Fame will be available from November 8th. Contact US Gold at One 10 The Parkway Industrial Centre, Henneage, Sarnes, Birmingham, 021 319 5830.

CBM loss — Amiga hope

COMMODORE International has announced losses of \$114 million for the fiscal year ending June 30th 1985. The figures stand in stark contrast to last year's profit of \$144 million. Though Commodore International does not publish separate figures for each country, a consultancy that the UK operation has made a loss. Worldwide sales were down by 56% in the last quarter.

President Irving Gould blamed the figures on the downturn in the US computer market, a \$60 million currency write down, and "one-time charges" of \$60 million. Commodore UK, a hope now is that the C128 and the forthcoming Amiga backed by aggressive packaging deals and heavy advertising will turn the tide for the company within next financial year.

Signs for the Amiga are good, detailed from software development houses has been such that Commodore has made available. Attention is concentrated on the UK, remains in being. Franchise. As a cost of £1000 developers will be able to obtain the central unit, video disk drive, external disk drive, and a full range of software development tools. Commodore's Chris Koley was quick to point out that "the price for the development system does not reflect the embedded retail profit" — which is now expected to be around £1,200.

C128 pack plans

COMMODORE's marketing plans for the C128 are now almost finalised. The machine is to be sold at £249.99 packaged with a 1170 disk drive.

The 1170 is a changes version of the double-headed 1171 which was thought to be too expensive for the market at £299. The 1170 is a single-headed 1170 drive designed specifically for the C128, but fully compatible with all other Commodore computers. Equipped with a built-in 640K microprocessor, the 1170 has 2K RAM, 52K, 512K and integral 1040K. On the C128, data transfer rates are 10Mbps in 64 mode up to 1200bps in 128 mode and 7200bps in CP/M mode. For external storage support is 540K, and a CP/M mode the 1170 is ready for compatibility with EasPro, Osborne, and some 1804 formats.

Commodore's Chris Koley explained that the move was intended to encourage the C128 to be used as 128 and CP/M mode. "In order to get the best out of the 128 and use CP/M efficiently an industry standard 511 disk drive is needed so we have decided to subsidise part of the cost ourselves."

Meanwhile it is to be sold in part of a Christmas Compo-

puter pack at £199, with a 1150 disc drive, Music Maker software package, Adventure Designer's Friend graphics

software, and a 1150 disc drive. Music Maker software package, Adventure Designer's Friend graphics



software, the Music Maker, the Secret of Monkey Isle, and a copy of the best selling book, The Gateway Power of Adventure.

1150 disk drive is a 1150-400 priced at £199.99, with 1150 and copies of the US

Chris Koley commented "It's our belief that those companies will sell in 'highland software' are designed for the owner. When people open their presents at Christmas they expect

Gold games, Super Zaxxon and Boulder — Ultimate 3 for £299. Contact Commodore at 1 Home of a Way, Wotton North Industrial Estate, Croy, Surrey, 0336 300013.

More on mice

POLITRINO has made a review of the Data Mouse for the 64, now new members of a new Wiggins Mouse has launched the M52000 mouse, an optical mouse promising measurement to a resolution of 100 points in the inch.

The rubber coated ball is designed to offer smooth operation without slipping. Offered with the mouse is a graphics

software package including: fractional drawing, line rubber banding, corner clips, loose fill colors, perspective, undo, zoom, copy, paste, mirror and a whole range of other commands.

Results can be printed out on the M52000 or M52001 printer. The software is available for £149.99 from Wiggins, 32 Davis



Rose, London, 0115 1460 61. Tel 0115 1213. No longer in more the M5 2000 type.

64's fixed fast

TRILONG of Bradford has announced a new repair service for the 64 with a standard charge for £27.50 including parts, labour and return postage. Your faulty 64 will be repaired with five day turnaround. For the 64 the company offers same day repair and dispatch subject to availability of spares.

All repairs are guaranteed for three months, and if you require more details you can get a free catalogue from Trilong an email for a 17p stamp. Contact Trilong, 29 Nelson Lane Bradford, BD4 4QA, 0274 654739.

BT buys Beyond

BRITISH TELECOM has bought the software house Beyond. The company, formerly owned by IMAF, will now be part of BT's New Information Services division. Plans for Beyond's Christmas releases, including the Superbike game, should not be affected. There are currently negotiations for the release, due at Christmas. All production and financial staff from Beyond will be joining BT.

There are no plans to join Beyond to the *Firebird* label. Beyond and Microchips will continue to be marketed separately. For the moment, Beyond will remain an IMAF unit, a move to BT's General Games trading is argued. Meanwhile, BT's Firebird label has announced a new "Hot Range" to complete its

included in the Silver range has not right for the Gold series. Titles for the set will include *Magnum*, *Garry the Gun*, *Conia Capers* and *Knightmare Silver* range has been set as price from £2.95 to £3.99. Though smaller companies, projects, the continuation of Ultimate's *Nature World* and *Knightmare* has been delayed due to problems with the production studios.

Comet Firebird at Watlington House, Upper St Martin's Lane, Covent Garden, London WC2E.

Remember Elephant

DEMOMON, Elephant floppy disks are being produced by special facilities from desktop. A range of eye-catching graphics including T-shirts, nylon sweatshirts, and baseball caps all displaying Demomax's famous elephant logo is available in stores. For box tops from Elephant disk 16-packs.

For find a dealer displaying the Elephant logo, buy your disks and fill in an application form, and Demomax will mail you the goods. For more details contact Demomax Microcomputing Co Ltd, Colford Way, Watford, Herts. WD24 4JF. 0825 44244.

Rabbit hops back

IT'S NOT when that photos of managing directors of software companies are interesting enough to merit publication in the evening *Newsweek* Horizons, then when, like then, it is not often that these gentlemen are dressed as bunny rabbits.

Celebrating the 10th anniversary of the *Rabbit* name as a brand software label operated by *Virgin*, Nick Alexander (black bunny) and the rest of the *Virgin* staff were for a hops in the park. In a rare moment of levity, Nick commented "The software market is really looking up after a year in the doldrums, so we feel that this is the time to bring out *Rabbit* label." Under the byline "Virgin staff budget" *Rabbit* will be marking spring games at £19.99. The first title, for the



CBM 6400. *Virgin* 2 months worth of titles set as a gift to all *Virgin* and *Rabbit* software owners or featuring a new program. Microchips has

more. Comet *Virgin* at 24 Wycombe Road, 109 Portobello Road, London W1A, 01 737 8050 for more referring on.



THE LATEST 64 game from Ultimate *Ultimate*, will be released soon. Following closely on the heels of *Blackwyche* (Imbros) is now in recent flight and *Ultimate* the opportunity here as a mark on by the Gods. The game will be packaged like

Blackwyche in the same developer's custom cases and will cost £29.95.

The game will be reviewed in the January issue — meanwhile, contact *Ultimate* at The Great Aubrey-de-la-Zoach, Leicester street, LE1 5RU.

Simple Simon

USERS of Commodore's *Simon* think package will be pleased to see a book dedicated to the subject published by Prentice-Hall International. *Commodore's Handbook of Simon* done by John Roth, costs £11.95. It includes a



foreword by David Simons, and contains of more reviews including material on programming aids, I/O systems, data handling, low and hi-res graphics, sound, and peripheral control with *Simon*. *Basic*.

All 141 commands are listed and described in an appendix, and there is a full index.

Contact Prentice-Hall, 40 Wood Lane East, Hemel Hempstead, Herts.

SOFTWARE PRICE LIST Prices include VAT
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11. *Journal of the American Medical Association*, 271:1221-1222, 1994



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Figure 10.10 — *Calculus* is the most popular course in the U.S. — 1996

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MINTER MANIA

Back from his hole, The Harry One summarizes on new technology, sets the record straight on AmigaSoft, and ponders on the nature of hypes

I'M NOW back after a really long 2 week holiday in Corsica. I don't need a single bit of the whole case I was on there, just lay there being on the beach and exposing my body to a healthy tanner. I'm like 98 million miles deep in order to darken my complexion. And I feel like better for it, but it does mean that I've been away from the 'Net since for a while. Mind you I didn't discuss really from video games, there was Susan of Stars (let me see if ever heard of that one?) in which I became fairly adept. The game itself is really primitive by today's standards, but was quite enjoyable nonetheless.

Since I'm back, I've been taking a holiday from Commodore work to do the Commodore for the Atari 520. Using the 520 makes me realize that home computers are going to make a significant leap in power very shortly. The C64 represented the last big advance when it was launched in the mid of '82, even at £400 it created a stamp when compared to the VIC-20 and ZX-801 of the day. That price of £400 now came down to £160 for the likes and the 64 came to be the most popular games machine above

all well. Back off me for a while now, a gaming hobby and it'll soon become to spend the long dark evenings sitting indoors and getting into a sort of fevered stupor. What is it about the best time for games computers — is the summer two years in to it, rather than it is just for a game machine. And the only games that do well are the sports ones, and then only if the Olympics are on (see Great Britain at all the Olympics we had last summer!).

Speaking of sports and water, I still realize that my idea for a diving game is worthy of museum. I first described this in my newsletter a while back, but I'll go through it again for the benefit of anyone that also might fancy a go at home but can't think what to do.

Boring

When the big games are quite boring, being just stuck down in the air just not moving any game play. Boring, boring, boring. My ideal diving game would involve a motor going down the slope at many velocity to the accompaniment of a good rock record track so whether it's just waiting a 'William Tell' something to wipe out somebody's team knock people off the tower and generally create mayhem for bonus points. You could get especially large bonuses for wiping out more the schools and for not having someone jump. You could have other shots after you trying to take you over.

I really like the idea of a game like this, and it'd be well suited to the 64 with its sprites and smooth scroll.

I'm getting fed up at the moment with a lot of rumors flying about that I've sold my soul to AmigaSoft and that they've 'got' Lisasmith. In fact I have arranged for one game to be marketed by Amiga — but still under my label — but this is all at the moment. My main work is for Lisasmith doing preparing to light eye laser for the 16-bit machines and putting together my own 64 design. Worry not, the State is not about to sell out.



I haven't had much chance to play this month, having been away for a while, but I wouldn't help but notice all the strange happenings concerning Amiga's Who Dares Wins, a game I am not even to expect! Lots good ideas.

Apparently, as soon as the game came out, the hapless Amiga became the game was a sort of the up the same Commodore as it has the same the right. How very strange.



After was surprised by the game and its going on, the same programmer to create short own version (which I presume will be released as Commodore Miscellaneous Amiga) in one of the latest moves I see yet in the industry, change the graphics and gameplay of WSW and finally to avoid getting owned by Ellis, and then release it as Who Dares Wins.

Shooting from up

I do believe the shoot 'em up is coming back into fashion a bit, after having been displaced by arcade-style and more modern games which are now thoroughly on top and about time with Who's popular is the moment seem to be semi-drama and I as the Doctor Design mode. DID themselves have a couple of nice ones out there and I know of more in development. Software speech is considerably less top than it was a couple of years ago. Constructors are the 78-100.

I must finish now, it's late and I'm knocked after a heavy Commodore session. Hopefully I should have more news and more, the Commodore Miscellaneous there will have been and I'll be the more in touch with the scene. Hopefully I should have Amiga and a copy of Minsky by then (think of a book I'm going to get hold of!).

—YAK, on the beach on a cloud of petals
000000 ■



The same thing will happen once through the Atari 520. Although very much a heavy move away, I'm sure that as a year it could be selling in the same sort of people who bought these first three could be the same sort of power. Hopefully the same thing will happen using the same chip on.

Your machine of a couple of years ago, will probably be transactional £4000 and have more memory than a single programmer could dream of! You'll be able to forget 16 colours, multi-colour mode and screen attributes, you'll have a choice of thousands of bits in very high resolution. You'll probably be able to buy a Defender program better than the inside original. Forget tape drives, now they'll vanish and become just as fast memory replaced by more, a floppy and cheap 3.5 inch drives. And the software available will be absolutely amazing.

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Data compiled by Gallup from a panel of specialist and chain stores, for the month ending September 7th

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AS TEST DRIVEN BY THE EXPERTS.

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US GOLD put a disk inside one of the UK software market a couple of years ago — by simply introducing top US titles in a repackaged form, it drew a third of the price of the domestic imports!

Since then disk titles have rarely been out of the charts, and as last they have turned their attention to adventure.

The first of the Sierra On-Line titles, **Myst and Phoenix** has already been reviewed in these pages, and is due to be followed by a number. **Ultima**, **Ultima and Ultima** and the **Golden River**.

Myst is set in the first and the second of the titles. You are cast as a space cadet with the chance to be a hero. A huge mansion with a colossal stone wall blocks and you have just seven hours to solve your ship to escape and discover the deadly secret. You will begin your journey at ancient control and then gather the equipment and weapons to fly the ship and successfully save the Earth.

In contrast with all the Sierra On-Line games, these two are graphic adventures using a true world command or action. The graphics are very colorful and of a high quality and atmospheric. If you've played adventures like **Level 9** and **Before** you might find a little difficult to play down to commands like "GO DOWN" and "TALK SECRETARY" and the limited vocabulary will mean a struggle for the right



last part the players to learn your back in **Ultima** **Ultima** words that players usually pass off.

Ultima and the Golden River is a much faster and longer game despite the mythological trappings of the tale!

You are the legendary wizard, charged by the King, to return the Golden River to Gorm. You must search the land around you for clues and equipment before going on the back and returning a new (or) a stream for the land about.

You and your crew will encounter many of the hazards and perils that to be found meeting friend and foe to recover the various items and magical words to enable you to complete your quest. Harp, sword and the shielded cyphers will throw you if they can. Even the gods may take a hand!



This game is the most (highly) of the three I've played despite the struggle to find the most pleasing to play, some obstacles it is large enough, and the problems hard enough to provide many hours of frustration fun — if that's not too

ALL
AMERICAN

ADVENTURE

Ken Matthews looks at the latest craze to cross the Atlantic — US Gold's disk-based graphic adventure programs



Ultima sets out on his quest for the flame

much of a consideration.

Another new title that I've only just received hails from America. Eight software was US Gold and is called **Ultima** a Robin Lee-writer by Brian Proulx, who was at one time responsible for being responsible for three of Adventure International's most difficult games: **Dragon** from **Ultima**, **The Curse of Crowley** from **Ultima** and **San Francisco Earthquake 1906**.

The theme of the game is as original as the author's spelling of his name! It seems that you have died and been wrongly resurrected to the land of Hell. Remarkable though,



Lucifer offers you a chance to reach Heaven by helping him out with a little problem here or there.

Characters representing the epitome of evil like Hitler and Mussolini have settled in to the Underworld and are now plotting the overthrow of Satan to rule there for eternity.

URES

— In this third issue, the game basically fits all the criteria set out above. You get one control for figures and turn

Atkinson's game uses the old two month system again: a period vocabulary is provided in the manual, does allow you to speed more take on the real problems of the game rather than forget it. The manual's the previous game would have been in the inclusion of some of the more central players in the support, however.

The graphics are of a very high quality and do add to the atmosphere of the game. I've barely scratched the surface in finding a class or so in motion — though that was hard enough. Still, I'm sure I'm in for much more from looking and late night before I crack this one and I'll be happy to recommend it on an original plot and tricky problems.

To round off, I'd like to mention a Santa rule that's been around a while now — **Ultima III**. The game perhaps falls more in the lines of action-adventure and as the title suggests, it's the third in a series of such games. The plot of the series is to take an adventurer on a journey in time and space to knowledge, power and ultimate triumph.



On your detailed

the adventure, however.

play them both, and necessary to complete them in play to finish it.

The play system is as a first in Dungeons and Dragons as I've seen on a computer and shows that playfully in what a simple adventure on a group to enter the arena. The familiar professions of fighter, thief, wizard and cleric are all available. The map of Ultima covers a whole world with towns, cities and you're where you can find, improve your skills and equipment and receive the important clues leading to your ultimate goal.

If the idea appeals to you I'm happy to recommend Ultima, with the numerous characters of the computer, mainly provided with the official American version are

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also with graphics.

U.S. Gold's Ultima is the first in the series and I'd need to find an alternative (40 £15.95)

directly from the U.S. Gold copy.

U.S. Gold's strategy is a good one — producing high quality software in constant prices. They are still many first class titles yet to go for budget cost and with enough support from my advertisers, we could have many more to go on.



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Adventurous Ariolasoft

Ken Matthews discovers the joys of DIY adventures, and enters the murky world of computer hacking with Activision's latest

UNLIKE you or just returned from Alpha 1, let me tell you I have at least have feared of the L'Arche, now, because **Hacker** Arts adventures have started appearing over how today the Activision's format.

To me at least, miles like MUI, L'E, Action and their monthly computer art are expected some of the finest programming techniques. Now to the Electronic Arts team in Sierra

Adventure Construction Set™



Smith whose Designers and Designers role action adventures. As Baker and Kerner of **Hacker** have been designing that place comes for some time. Their games are dedicated space that allow the player to enter a heretofore from a case of doors and set out on an epic of treasure-gathering, monster slaying, mystery in search of love, fortune and even immortality! All that sound with some tricky puzzles and witty messages make extremely playable adventures. As the **Hacker** has decided on several states of his users and to carry and made his skill using the brilliant **Adventure Construction Set**!

I could take up most of the way along about this power-packed programme — since every feature you could imagine is covered in the 44 page manual — but I'll stick to the basic format for now.

The utility features three basic sets that allow you to create Fantasy, Mystery or Science Fiction adventures.

Once you decide which sort of game you prefer, the amount of work you need to put in is strictly up to you. You have the choice of plotting the whole thing down to the tiniest detail or letting the programme take over in its own time.

The game you construct may contain up to 240 locations which can be divided into regions, as many as 16 rooms each. The world begins to breathe in the thought of trying to take you through the doors and

doors of options to suffice it to say that you have access to some effects and up to 16 creatures among the 1000 props that can be put in a region — if you can't find one that's just right you can even modify existing shapes or design your own!

The background you have designed can now be populated with other characters. Once again it is up to you to pick their behaviour and the powers they may have. Maps can be made available and up to 115 messages can be used to add to the final touch.

I can say it would take a long time to get to grips with the full potential of this system, which makes the aspect of allowing the computer to 'take over' at almost any point of the design process a seriously touch. If you are getting a bit out of your depth or just tired, wait, let the CPU put an end to it and go on a trip of its own.

The basics are covered by no fewer than seven main adventures which introduce the principles of the programme in easy stages.

Finally, and to show you what can be done, a full-blown adventure, **Waves of Light** is included. This excellent game alone is worth the price of the whole package and it can be downloaded using the **Baker** utility to give "worked examples" of how the available techniques can be used.

The **Adventure Construction Set** is a masterpiece deserving of the highest accolades. The owner of this package can look forward to years of entertainment at a price well below that you would make just this, ... etc.

do your Christmas stocking.

Admittedly, I would have to believe that one of the main pleasures of hacking is that you never know quite what you're getting yourself into as in as the film **Wargames**, how to get out of it? **Adventure** can also take the form of those new games **Hacker** (just like the last night's student games) you have to look at manual to work on — you are on your own.

The opening "log-on" sequence is a little puzzling at first, but that's all right.

You should think up in context of a robot device technology to an unknown company born on determining the world to their concept of the natural forces behind the Earth's core.

Things have gone wrong at the secret site and the power of a dimensional dimension spring details of the code, up here follow into the hands of open doors and the globe. You must use the subterranean tunnels, cross crossing the globe to travel from city to city and recover the evidence which must be delivered to the FBI in Washington before you time runs out.

You can print a host of money to begin your task and your problems begin — each step has instructions for safe available only after he has graduated past with his piece of documents. You must be very careful as to how you're what is necessary or you'll run out of cash and money. Truly, of all, some open will cause one of several different items, but some will exist in only one of the 50 on offer.

If this isn't enough, you even to have got a full action with begin to go on the black



not long after you start. Add in the fact that the quality of it brings your presence and you're got a really tight game on your hands.

Clear sound effects and excellent graphics, particularly in the three surface locations, combine to make this an extremely playable game that can only add to the good reputation that **Activision** has been building with the quality of their recent releases.

Next month I shall leave the danger of **Wargames**, uncover the darker secrets of **Adam** and hopefully, come face to face with the **Warrior in Paradise**. ■

HOT PRINTER

Competition in the low price printer market is heating up — literally, in the case of Alphacom's 81 thermal printer. John Cochrane checks it out

NOT 50 years ago the only type of printer which most users of home micro could hope to afford was the so-called thermal printer. Thermal printers work on the principle of passing a print head over the surface of specially heat-sensitive paper. The print head provides a very small amount of heat, very precisely and rapidly controlled so that a line of characters can be printed out. As each point on the paper where heat is applied, a dot is created, the combination of these dots forming the printed characters. The heat-sensitive paper, which normally comes in roll form, is more expensive than plain paper however.

Simplicity

The low cost of thermal printers comes from their relative simplicity as the print head has no internal moving parts. The principal competitors to thermal printers are currently the cheap dot matrix printers. Their basic complex print heads which use tiny needles to create each dot rather than the heat source. Dot matrix printers require a print ribbon to function, which sits between the print head and the paper and forces a dot of ink on the paper whenever one of the print head needles is activated.

Obviously with their needles and ribbons, dot matrix printers are more complex to produce than thermal printers and thus more expensive. Over the past few years however the costs of manufacturing all types of printer have fallen considerably, as manufacturing technology improves and as the scale of manufacture increases. A major component in the purchase price of any printer these days is the cost of distribution and marketing which will be roughly similar for all printer types. The appeal of all this is that the price advantage of thermal printers has been eroded away and now few new thermal printers are being produced.

Alphacom, Inc. of California specializes in low-cost thermal printers. They were contacted by Times in the USA to design a cheap printer for the Sinclair computers to be sold by Times in the States (the Sinclair ZX printer was revealed as unreliable there). This printer was then imported as a Europe as the Alpha com 81. As it was designed for the Sinclair machines it only had a 32 column print width but was available then at around \$68 and is genuine clear and reliable price when dot matrix printers were still making speeches of £100 (allowing for faults and repairs).

Disturbed from dreams of other models of home computer manufacturers Alphacom set to design their printer that could bring the Alphacom 42. The cost of the 42 was up



around \$100 but the printer included a unique feature of a changeable plug-in memory tape interface board allowing it to be used with nearly any of the popular computers without the need for additional interfaces or buffers. The Alphacom 42 designer it's reasonably clear not going as popular as was hoped, possibly because it was considerably more expensive than the systems for the Sinclair.

Now Alphacom have gone a step further. The latest model, the 81, includes the plug-in interface head and doubles the paper width to give 80 columns. The looks of the Alphacom 81 are also much improved in my eyes at least over those of its predecessors. Many of the printer components are plastic rather than metal, which leads to a light design that of good quality. An overall metal chassis provides strength and stiffness, enough to keep the printer where it is supposed to be. Overall the printer gives the impression that, if not constructed it should prove reliable.

Interface

In use the printer is fast and quiet. With the correct interface head it behaves just like a Commodore printer and is hence compatible with most commercial software. One problem which is common to nearly all thermal printers however is the quality of the finished printed page. Although the Alphacom produces clear black or blue print depending on the paper used, the paper is in a form which means that you must use a roll of page-sized paper as it is printed. If you want one size only pages you must further trim the paper and some how trim out the

card and the rest of thing to use with a word processor). As a cheap means of productivity programs built up to cater for your use use the Alphacom 81 makes good sense.

Graphics

As well as printing text the Alphacom can be used to graphics mode, which means that provided you don't mind writing your own software you can produce screen dumps or high-resolution patterns using the printer. The way you can choose between normal (understand) reverse (like reverse video) and along and use along with the Commodore graphics characters. All the options are included in a sheet but surprisingly well written manual which comes with the overall Commodore interface head.

Competition for the Alphacom 81 comes from the old faithful Commodore 80 and the Brother 8000C. It's worth considering all of these if you are in the market for a cheap printer, but decide mainly what you want from a printer and look at discount prices before you choose between them. Prices tend to fluctuate these days but the Alphacom at £79 looks the cheapest at the moment. ■

HARDWARE: Alphacom 81 PRINTER
NEEDS: Commodore basic computer, with serial port
PRICE: £79 (Roll paper — £1.50 for 2 rolls)
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Window on the world

This sample program from Duncan Anderson allows you to easily define a screen window on your 64, protecting text as you input commands

IN LIVING KIML-64S, and 1982 marks the course of my life. I have found one particular feature of their operating systems to be of particular use — that of defining a scrolling window, which is then considered as the whole screen.

This feature is particularly useful where the user is required to make an input from the keyboard — all text other than the 64, a painfully on-up screen display soon scrolls off the map, where the user makes a mistake, and a **REDO FROM START** error message appears, or the input takes two lines, instead of the anticipated one line. Never lost, with the use of this screen machine code system, you can define an input window, and protect your status and instructions/graphics. In the writing of this program, there were two ways of approaching the problem.

To use the routine, type in the BASIC listing, and save it before running, as it will **NEW** itself upon completion. When the program has run, the screen will show control on the top half of the screen, which is now protected by a window in the bottom half — so make the screen scroll, and the window should stay in place.

Furthermore, the **Window**, and **Clear** keys, have been modified so that they only act upon the window — clear only clears the window, and home leaves the cursor to the

top L/R corner of the screen. To create a window of your own dimensions, save the command **FW** followed by a number from 0 to 23 (the line number of the top of the window).

In writing about writing this routine, I realised that I had two possible cases to take, namely:

- (a) Reverse the screen printing, and scrolling screen using the vector, or (b) Copy the ROM's own RAM, and make changes, as necessary to them.

Interpreter

I needed for the second case the instructions in the operating system are surprisingly small, and reversing these routines would have involved copying large sections of the kernel into my program. Furthermore, I decided to implement a special command in BASIC to enable the user to use **SPS** and **POKE** statements in order to get the parameters into the routine — the **FW** command, obviously needed to simplify the recognition of a window the user gives.

When the machine code is introduced, two processors are performed:

- (1) The vector for taking evaluation (**DATA** 1990) is introduced to point to the new window routine, whose **Parade** code is 1. Jump to the sub-routine which places the next byte of BASIC text into the accumulator (**STB** 2). Compare this with 17 (jump marker

for new keycode) 3. If new keycode, then jump to line 1940-1945. Else, replace the byte of text, and jump to the old evaluation routine.

(2) The kernel and basic ROM's are copied into the RAM which they occupy, appropriate alterations are made, and the ROM's are loaded back to reveal the new improved operating system.

When the **FW** command is introduced, control is transferred to the window routine which evaluates the parameters (by jumping to two ROM routines — **DATA** 1940, which evaluates the parameters, placing in the floating point accumulator. Then the routine at **19077** is used to convert it, the result being in the A/V register, and places them into the operating system.

For those who may wish to add other machine-code routines while this one is operative, please note that the two-page location **19B** & **19C**, are now used as storage for the window routine.

As can be seen from this program, the addition of commands into the operating system is relatively straightforward. As long as the sub-routine, in the computer are used, there is little to be implementing the command — the actual code for getting the 126 to recognise the statement, very little code added, and that includes checks for errors. ■

```

1 REM *****
2 REM **** WINDOW UPDATE TO KERNEL ****
3 REM **** (C) D.ANDERSON 1982 ****
4 REM **** THIS PROGRAM WILL NEW ****
5 REM **** ITSELF - SO SAVE BEFORE ****
6 REM **** RUNNING ****
7 REM *****
100 ADDRESS = 49152
105 READ HEX#
110 IF HEX#="XX" THEN GOTO 7000
120 DOSUB 1000
125 PRINT "D",ADDRESS
130 POKE ADDRESS,DECIMAL
135 ADDRESS = ADDRESS + 1
140 GOTO 105
1000 REM *** HEX TO DECIMAL CONVERT ***
1005 DECIMAL=0
1010 FOR COUNT=1 TO LEN(HEX#)
1020 DECIMAL=DECIMAL*16
1030 IF MID$(HEX#,COUNT,1) > "9" THEN 1060
1040 DECIMAL=DECIMAL+ASC(MID$(HEX#,COUNT,1))-48
1050 GOTO 1070
1060 DECIMAL=DECIMAL+ASC(MID$(HEX#,COUNT,1))-55
1070 NEXT COUNT
1080 RETURN

```

MS 2000 COMMODORE MOUSE

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READERS SURVEY

A few issues back we carried out a readers survey. After an enormous response, we collated all the results, and have been using the information to give you the sort of Commodore magazine you want.

For your interest, here are some figures with a few comments.

MICROS OWNED



	CBM 64	67.6%
	Plus 26	14.9%
	C16	13.8%
	Plus 4	3.4%
	5544	0.3%

It would be interesting to run this survey again in a year, and assess the penetration of the C128 and Amiga.

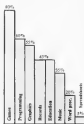
READERS' AGES



	16-20	42.0%
	21-25	34.7%
	26-30	19.2%
	31+	13.1%

Computer subscribers: 4.3%.
Maximal subscribers: 3.9%.
30% of readers say they may change their mind in the next year, most popular possibility is the C128.

MICRO USES



Total adds up to more than 100% due to overlapping interests.

MAGAZINE FEATURES

We asked you how interested you were in a range of subjects and how much you liked the various features in *Commodore Magazine*. The subjects at which readers are most interested were:

Basic programming	61%
Graphics	58%
Amiga games	49%
Books	47%
Machine code	46%
Hardware reviews	46%
Communications	20%
Word processing	15%
Databases	15%
Advances	10%
Spreadsheets	10%

Most games players were understandably most interested in spreadsheets, databases and word processing features. Communications articles were also less an most readers' list of priorities.

Readers' opinions on the regular features fell roughly into the same pattern. The most liked features were:

Letters	85%
Competitions	81%
News	71%
Games	70%
Reviews	70%
Hardware	60%
Programming	60%
Cartoons	51%
Impact	50%
Advances	50%
Profile	28%

The most disliked features were the *Advances* column (20%), *Profile* (20%), and *Cartoons* (20%). Very few disliked the news, letters, hardware reviews or competitions. *Advances* games are already as popular as any other low or high item. We can't understand the number who disliked the *Profile* feature: were many readers requested more? And the *Letters* is very fond of the cartoons, so heads off. On pressed topics, 28% typed them in often, 74% sometimes and 5% never.

Most popular suggestions for extra features included news from America (many with program and computer code), simple hardware projects and interfacing, and a page of their programming routines and game tips. We'll be looking at all these ideas in future issues.



There seems to be a feeling that there aren't enough programming articles and readers' letters, so we'll be looking at the possibility of increasing them. The readers' letters section obviously rates very highly so you can start sending them straight in!

Thanks to everyone who took the time to fill in the forms - we hope to be able to provide you with a better magazine as a result of your efforts. ■

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Sound words

I AM designing and making a technology project at school, and am looking for any available information on sound recognition devices for the IBM 64. Could you give me some idea what is involved?

Tony Jones
Berkshire
Essex

HAVE A LOOK at the September issue, when we review the *Seeing Voice Master*. This should give some idea. Also available is the *Big Fory* system from William Smart, which was reviewed in April 1985.

Generally speaking, sounds are transformed into waveforms using a microphone and an analogue to digital converter. The waveform is then digitised and compared with number tables in the computer's memory. This appropriate software language programming and the necessary hardware would be yours to design. If you can obtain a copy of *Robotics Talk: 6385 Applications* from Tekes, ISBN number 0-85288-002-6, this might be of some help to you.

Load error

I HAVE A 64 and the late drive has stopped working. The fault lies with the 6385 CPU, and I will have to replace it. My 64 is only about 18 months old, and I know of late other 64 owners who have had this problem, and all have used a reset switch. Could this be the cause of the problem? I have also found that in 128 mode, the C128 releases the screen too slowly for it to be used as a games machine; is this true?

P. Papp
Surrey
Essex

IF YOUR 64s like there may be faults in the reset switches, leaving some voltage floating around where it should not be. Have you tried interchanging the two 6385 chips? It may cure the

problem provided you fit the faulty reset switch.

No, the screen refresh is not slower in C128 mode, when you happen to be in 64 column mode is that when using (bitmapped) graphics. Only possible on machine language) all data is passed through a register in the 6385 (80 column video chip) and not memory mapped, so this update of the screen will take twice as long as either the 128 or 64 mode, as the 128 is 80 column mode, which uses the 6385 (40 column video chip). But the 128 is faster in 40 column mode for games programming.

Vic words

I AM considering buying a word processing package for the Vic 20. Could you suggest the best package which will be suitable for general use and writing short letters?

Andrew Jones
Worcestershire
Wales

FOR ANY VIC, including unexpanded, you can try *Microletter*, a cartridge which fits in the expansion slot. This is available from Thom-DMI at Thomas House, 276 Rushborough Road, Rushborough, Hampshire GU14 7NU.

With at least 8K, try *Word Processor 1.2* from Intelligent Software. This is an American package, so you will have to contact a specialist dealer. With at least 16K, you could try *Proletter*, which should be available from Commodore's Verbit at 8504-265889. Another good choice would be *Word Manager*, which supports 60 columns.

Three sheets

I REQUIRE a spreadsheet for the 64, but there is a bewildering array of possibilities. I have already been caught out buying a "cheap" home finance package, and do not want to make the same mistake again.

Basically I require a spreadsheet which can

generate a pie chart or bar chart display, and also have extensive file handling so I can use it like a filing cabinet at less than £20.
*Dr M J Ashby
Northants*

ON *AUDUGENIC's* *Micro Muggle* generates horizontal or vertical bar graphs or worder graphs, and is also a fully user programmable database management system.



Another option is *Proletter 2*, which gives an 80 column option which is legible though not recommended for prolonged viewing.

A bit more expensive, but 400 point value for money is *Vicwriter*, which gives full database plus line and bar graph facilities. See your local dealer for an opportunity to compare the options.

Quiz query

I AM writing a quiz game for my C18, which has two players pressing buttons when they think they know the answer. There are going to be about 400 questions in the quiz, but I can't work out a routine to make a pick random question that not pick them again. Could you help me?

Andrew Roberts
St Helens
Merseyside

I ASKED that your 600 questions are in the form of data statements in your program. If you don't mind the questions always being asked in the same order, a simple loop will suffice:
100 FOR I=1 TO 600
READ Q,AS PRINT "The next question is" Q:
110 INPUT "Your answer", A:
GOTO 100

120 IF A=AS THEN
PRINT "Correct"
C=C+1:END:GOTO 100
130 PRINT "Wrong answer"
NEXT
140 PRINT "You have answered "C" questions correctly"
150 END
160 DATA 6274 each question, followed by its answer.

The alternative is to pick a question using a number generated using *RND%*, from 1 to 600 answers. The question and answers will have to be loaded into an array first. The number picked will then print. Questioned, say, and check the answer. Using a number array such as *A(6)*, which is set to equal 1 for each value of 1 that is used, find the value generating a random number to make sure that this number has not been used previously. If so, then discard it and try again. You must also first write a number to see if you have already used all 600 questions, then set from the random number loop otherwise you will go around forever!

Bulletins

I WOULD LIKE to find out something more about "bulletin boards".

I understand that you need a modem to access them, but what sort of hardware and software do you need to get up your own? Is it necessary to get any form of license to operate one? And what is the best way to publish such a bulletin board when you're on a 16?

G. Lloyd
South London
NO LICENSE is required as run a bulletin board — after all, you are using the telephone, not broadcasting. Most bulletin boards in this country operate at 300 baud, but duplex, with only a few using reverse. Picked speed (which enables a Personal modem to access them). *Proletter* and *Microletter* operate on 1200/75 baud. Suitable software to run a 300 baud service was listed by the excellent *American magazine*, *CompuLink's* *Computer*, in their parts recently.



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Artist 2000

This 40 column version from Frank Bentley of Market Harborough

THIS PROGRAM Artist 2000 is designed to run on the fd using a joystick or Pen Two. As the name suggests, it allows you to design pictures, save them to tape or disk, and recall them as you desire.

Pictures are created using the 64x128 graphics character set. Three screen locations are used, one for creating the design, one for displaying the instructions, which are accessed by pressing 'I'. If the space bar is pressed, it accesses a third screen which displays the whole 256 character graphics set. On this screen, the cursor flashes at the top left hand corner. Move the cursor over the desired character with the joystick, press the fire button, and the program will return to the design screen.

Pictures **MUST** be **STORIED** by pressing FF before saving to tape or disk. This means a short delay while the memory is filled with data. Typical refreshing times are 4 seconds for tape or 1 minute for disk.

Each screen of the program is headed with optional REMs.

You might like to use this program to enter our Computer Graphics Challenge. If so, please let us know that you have used a when you send us your entries.

```

1 REM *****
2 REM *      ARTIST 2000      *
3 REM * BY FRANK BENTLEY 1984 *
4 REM *****
5 REM * CLR PAGE1,PROTECT PAGE 14/15 *
6 REM *****
9 PRINT@BANK(144):GOSUB(1328)-POKE532.56:POKE536.56
10 X=1524:D=54272:J=56328:CL=7:H=168:D(H*P(11000)),GCX(1000)
20 PRINT@BANK(147)
27 REM *****
28 REM * PAGE 15  DISPLAY *
29 REM *****
30 POKE53272,(PEEK(53272)&HDC5)OR240:POKE548.60:PRINT@BANK(147)
40 PRINT@BANK(147):ARTIST 2000
50 PRINT@BANK(150)"OPT(048)"PRINT
60 PRINT@BANK(150)"CLEAR SCREEN"
70 PRINT@BANK(150)"CHANGE COLOUR"
80 PRINT@BANK(150)"RECALL PICTURE"
90 PRINT@BANK(150)"STORE PICTURE"
100 PRINT@BANK(150)"PAGE AND JOYSTICK TO CHANGE CHARACTER"
110 PRINT@BANK(150)"INSTRUCTIONS"PRINT:PRINT@BANK(150)"PRESS FIRE TO ERASE"
120 PRINT@BANK(150)"LOADED PICTURE FROM TAPE"
130 PRINT@BANK(150)"SAVE PICTURE TO TAPE"
140 PRINT@BANK(150)"LOAD PICTURE FROM DISK"
150 PRINT@BANK(150)"SAVE PICTURE TO DISK"
160 PRINT@BANK(150)"STORE PICTURE BEFORE SAYING"
170 PRINT@BANK(150)"PRESS KEY WHEN READY"
180 POKE53272,(PEEK(53272)&HDC5)OR240:POKE548.60
190 POKE53283.15:POKE53281.15
200 DETM IFM="""THEN200
207 REM *****
208 REM * BACK TO PAGE ONE *
209 REM *****
210 POKE53272.21:POKE548.4:POKE53283.8:POKE53281.8
220 POKE54296.15:POKE54277.200:POKE54276.200:POKE54275.17
227 REM *****
228 REM * MAIN PROGRAM *
229 REM *****
230 DETM
240 IFM="""THEN200
250 IFM="W"THENPRINT@BANK(147)
260 IFM="W"THENGOSUB200
270 IFM="W"THENGOSUB200
280 IFM="W"THENGOSUB200
290 IFM="W"THENCLEAR=1:IFCL=14THENCLEAR=1
300 IFM="W"THEN200
310 IFM="W"THEN200
320 IFM="W"THEN200

```




```

338 IFR=0 THENR=488
340 TT=TT+1
350 IF(PEEK(J)/H#80)=8THENX=X+1 TT=0 IFX>2823THENX=X-1
360 IF(PEEK(J)/H#40)=8THENX=X-1 TT=0 IFX<1824THENX=X+1
370 IF(PEEK(J)/H#20)=8THENX=X+00 TT=0 IFX>2823THENX=X-40
380 IF(PEEK(J)/H#00)=8THENX=X-40 TT=0 IFX<1824THENX=X+40
390 IF(PEEK(J)/H#160)=8THENPOKEX=X-32 GOTO298
400 OFR=ATHENPOKE34296.8
410 IFACXTHD42=0X7C8D(134254)+1 POKE34273.2 POKE34272.2 POKE34296.15
420 POKEX=X POKECX=X CL
430 $FTT=188THENCS=1878BND(13415)
440 $FTT(188THENPOKE33281.8 POKE33280.8
450 $FTT(18888FTT(158THENPOKE33281.CS POKE33280.CS
460 $FTT(188THENFTT=0
490 R=K GOTO298
495 REM *****
498 REM * STORE PICTURE *
499 REM *****
500 POKE34296.8 FOR=870393
510 C=K(R)=POKE(1824+R) C=C/R)=PEEK(33296+R)
520 NEXT R PRINTC=H(147) RETURN
527 REM *****
528 REM * LOAD PICTURE FROM TAPE *
529 REM *****
600 POKE33272.(PEEK(33272)/H#005)OR240 POKE648.68 PRINTC=H(147)
610 POKE33288.15 POKE33281.15
620 OPEN1:1.8:"COMP.ART"
630 FOR=870393
640 INPUT#1,C=K(R) INPUT#1,C=C/R) NEXT R
650 CLOSE1
660 GOTO298
757 REM *****
758 REM * SAVE PICTURE TO TAPE *
759 REM *****
800 POKE33272.(PEEK(33272)/H#005)OR240 POKE648.68 PRINTC=H(147)
810 POKE33288.15 POKE33281.15
820 OPEN1:1.1:"COMP.ART"
830 FOR=870393
840 PRINT#1,C=K(R) PRINT#1,C=C/R) NEXT R
850 CLOSE1
860 GOTO298
957 REM *****
958 REM * RECL PICTURE TO SCREEN *
959 REM *****
1000 POKE34296.8 PRINTC=H(147)
1010 FOR=870393 POKE1824+R.C=K(R) POKE33296+R.C=C/R) NEXT R
1020 RETURN
1097 REM *****
1098 REM * SELECT NEW CHARACTER *
1099 REM *****
1100 POKE33272.(PEEK(33272)/H#015)OR224 POKE648.66 X=14336 X#POKECX
1110 POKE33296.8 POKE33281.15
1120 IF(PEEK(J)/H#00)=8THENX=X+40 IFX<14336THENX=14336
1130 IF(PEEK(J)/H#02)=8THENX=X+40 IFX<15336THENX=15336
1140 IF(PEEK(J)/H#04)=8THENX=X+40 IFX<14336THENX=14336
1150 IF(PEEK(J)/H#06)=8THENX=X+40 IFX<15336THENX=15336
1160 IF(PEEK(J)/H#16)=8THENX=180
1170 X#PEEK(X) POKECX=X FOR=17028 NEXT R POKEX=X GOTO1128
1180 X#PEEK(X)
1190 POKE33272.(PEEK(33272)/H#015)OR36 POKE648.4 RETURN
1197 REM *****
1198 REM * LOAD PICTURE FROM DISK *

```



```

1197 REM *****
1200 POKE53272,(PEEK(53272)+AND(15)OR248) POKE648,60 PRINTCHR$(147)
1210 POKE53268,15 POKE53269,15
1220 OPEN:8,8,"B" COMP,APP,8,8"
1230 FOR=8TO999
1240 INPUT#8,CC$(R) INPUT#8,CC$(R) NEXT R
1250 CLOSE
1260 GOTO20
1267 REM *****
1280 REM * SAVE PICTURE TO DISK *
1289 REM *****
1480 POKE53272,(PEEK(53272)+AND(15)OR248) POKE648,60 PRINTCHR$(147)
1410 POKE53268,15 POKE53269,15
1420 OPEN:8,8,8,"B" COMP,APP,8,8"
1430 FOR=8TO999
1440 PRINT#8,CC$(R) PRINT#8,CC$(R) NEXT R
1450 CLOSE
1460 GOTO20
1467 REM *****
1480 REM * PAGE 14 DISPLAY *
1493 REM *****
1500 POKE53272,(PEEK(53272)+AND(15)OR248) POKE648,60
1510 PRINTCHR$(147)
1520 3=14326 FORC=8TO469STEP40 FOR=8TO19 POKE3+C*(2+82),3 3=39+1 NEXT R,C
1530 3=39 FORC=8TO16 POKE(399+(2+C)*3) 3=39+1 NEXT C
1540 3=8 POKE53272,(PEEK(53272)+AND(15)OR16) POKE648,4
1550 RETURN

```

Zig-Zag

This journal is the EMU edition of *Journal of Management and Organization*. Volume 1

2048-2A0 is a simple game using many useful programming techniques. The player represented by a star in the top right hand corner of the screen, has to move around the screen filling in the blank spaces. Direction is controlled by keys W, A, D and X. The — key switches the player's avatar level.

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the role of a room, but that lone point. You must dodge the blades which appear throughout the room, as the game ends. Points are given for the number of steps covered before the timer runs out. The score is drawn using random set graphics. The best is less than 1000. **PR EMI ADVY 100V**, and that is the end. **END GAME** **CHANCE**

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C16 WORD PROCESSOR - TEXT 14

Flowering wood prominent. Pedicels include. Anthers very short, slender. Ovary cone more or less fixed but varying to wood cone. Light yellowish. Folia dense, green to more or less purple when.

CIG FILE - DATA 16

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RESET BUTTON

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The soul of a new machine

Robcom's Turbo cartridges can massively expand your 64's capabilities. Derek Lawson puts them through their paces

Although housed in a standard Commodore 64 cartridge case the Robcom Turbo cartridges are in effect programming modules — the most powerful collection of routines ever collected together in one place.

Make no mistake — the Turbo cartridges are compulsory purchases for any serious 64 user. They solve some many of the problems of Commodore Basic, DOS and hardware and transform your computer into an altogether more powerful machine. The Turbo cartridges are cheaply placed in appearance, though they come packaged in a smart vinyl style case, containing the cartridge, cassette head alignment tape and a clear and full manual.

Powerful

There are five cartridges each with a different selection of utilities. The more powerful, the Turbo 30, contains all the available routines and many options that is the one you should buy. The extra cost involved is small in comparison with the value of the facilities gained.

So what is so special about Turbo 30? What can it do that other programming and cartridge cannot? Let's run through the facilities.

Firstly, the cartridge is machine transparent. It should operate without interference with any running software. However, in case of problems, you can type QUIT to switch the cartridge off without having to remove it.

The built in EDITOR function can also be helpful in the case of keyboard lock-ups, or for saving programs without disrupting Basic or machine code.

SHOW gives an on screen list of all the Turbo commands. The first main screen is the Basic programming toolkit, which includes a wide range of useful routines. AUTO crosses program line numbers such as non-definite stop and DEL removes whole lines of data from memory. FIND will display each line containing a specific string, while REPEAT will display errors in programs not required — a useful feature of Commodore Basic 2.0.

OLD saves a NEWed program. PRINT shows a listing page by page. RETURN automatically renumbers listings should it's not clear from the manual whether it comes with renumbered lines. SET allows the screen and border colours to be changed. All these facilities are very useful, but Turbo has a

few more to run-out of time. The Advanced section of the Basic Toolkit contains routines to convert decimal to hex and back, enable or disable function keys, convert keys, store programs as they run, and in all the cartridges except 30 has all values of variables.

The text world section is the Function Key Programming, in press up the F1-F7 keys allow you to perform certain functions, such as copy to tape transfer disk loading, listing and running with a single keypress. All the experimental facilities keys become useful.



Many users will be most interested in the range of copy and disk commands. Turbo 30 allows you to SAVE programs to tape in a special format which uploads at ten times the normal speed. REUSE a program on tape with one already in memory, check whether a program now has been properly loaded onto tape to disk in a special format allowing a speed increase of up to five times on reloading. Move from disk to tape or disk, search a file, remove an old file or validate a disk, or change the direct number of your disk drive. Although relatively basic in scope with the exception of COM 600 it will regard each case of operation as a polished Turbo 30 also contains a range of COPY commands allowing programs on cassette or

disk of up to 160 blocks to be backed up, to cassette or disk.

For me, one of the most useful use of Commodore's Prime utility section. This contains Commodore routines allowing the Commodore printers to be used with a variable connection cable. You can print out in two modes, normal in which the Commodore graphics characters are reproduced and LISTING mode in which they are explained by easy to read abbreviations. In Commodore's opinion it is also possible to display the width of the print out you want, no more money being?

The Turbo 30 cartridge also contains a useful copying machine code routine, such as the thirty commands in only 4000 of memory. Although many users will never want to delver into the mysteries of machine code — most I'm afraid — thousands more will find the richness of a full spec, routine in such a useful general utility cartridge an unexpected bonus.

Last to make sure that owners even get the best use of the Turbo cartridges, the package also includes a cassette head alignment tape which by a simple routine involving coloured papers on the screen enables you to adjust the cassette's head with a small screwdriver, until the optimum alignment is achieved.

Collection

There are five cartridges in the series. Turbo 10 contains everything but the low disk routines and monitor. Turbo 20 is just the monitor. 30 has everything for the Commodore software and monitor. All everything but the low disk routines and 30 is the complete collection.

Apart from single-minded games players with no interest in saving, games or writing their own programs, it seems that if any Commodore 64 user who would not benefit from using a Turbo cartridge. Whether you count it as hardware or software the Turbo range has a lot closer to be one of the year's best computer products.

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THERE'S NOW a better way to learn to use your bit in the macroom — through the interactive delights of Compunet. Using the Commodore Communications module, you can upload your own program, interact with the Compunet database, or download software for your own use.

Users of the system quickly discovered the advantages of sharing programming techniques, especially in the area of graphics. What do you do with a computer picture when you have sweated blood to create it? Well, you could show it to your mate or if they want to roam around and look at your computer... then you can post it in the web Compunet, you can upload your master piece for everyone to see. Total fun too, there is no pretence, and new illustrations, regularly appear on the Compunet pages.

The first picture which is all to come the

Picture Gallery look, in retrospect, a little crude. Most users are much more sophisticated. That is no wonder. By putting pictures in the Picture Gallery, artists were able to share techniques with each other. Effects of light and shade, drawing scales to life size, avoiding colour limitations, and so on, were all discussed on the Chat Line. Recently artists such as MACH II have been uploading frames, exploiting their programming techniques.

Displaying your works on Compunet has other advantages — Virgin Games' fourth coming *Das Meer* program has a loading screen designed by Compunet artist Ben Jackson (B11), and the game is by another local early Bugg (GMB). And there are just a couple of examples of how the software houses take notice.

The move to compunet was launched by

one of the latest winning items ever loaded onto Compunet, Mike Stevenson's "Mac Headroom", which sent everyone scrambling for their disassemblers to find out how he'd done it!

Graphics isn't the web area where Compunet is of help — wandering toward "The Jungle" one is constantly coming across software links and tips.

When the Compunet service opens on the system as User Friendly, five people realise that they are also referring to the other users? I find this funny because more about my 64 and its capabilities, what I missed Compunet six months ago, then I did in the previous two years — and I don't expect to stop learning now.

Alan Linton (AL2)



PHICS CHALLENGE



SIX MS2000 MOUSE PACKAGES TO BE WON

COMPUTER ARTISTS can now get the chance to show off their works both in *Compendium Paintbox* and in *Compendium To* encourage you to do your best, we're offering SIX prizes of *Wangston House MS 2000 Mouse* packages to the winners of our first competition.

The MS 2000 is a high quality mouse using optical encoding technology to measure movements on a resolution of 100 points in the inch. It has a non-slip rubber coated ball and two pressure-actuated click switches.

Even more impressive than the hardware is the Mouse's graphics software. Supplied on cassette, the *Graphics* program enables you to use *Paintbox* drawing lines, rubber banding, circles, ellipses, boxes, fill, a wide palette of colours, images and brush shapes, zoom, copy, mirror, pan, and many other drawing features. You can also print out your efforts on the MSX printers. At £69.95, the MS-2000 mouse is the best way for computer artists to get great results from their machines.

The *Compendium Paintbox/Compendium To* competition is organised in three sections:

- **ANIMATION** — the most challenging section in which you must create a moving display of letters or letters graphics.
- **HI RES** — pictures like the *Compendium To* examples shown here, using the computer's hi res screen resources.
- **LOW RES** — pictures created using the *COM* graphics character set.

There will be two Mouse winners, plus runner up prizes, in each section.

You can enter the competition in two ways:

- **CNR** — if you are a *Compendium To* subscriber, look out for competition details in the newsletter and upload your picture into the competition page.
- **TWD** — if you do not subscribe to



Compendium To can send in your picture to *Compendium Paintbox MSX2000* South Western House, London WC2N 7PP, or e-mail at cdt@uk.ac.uk

In creating your pictures, you may use your own programming resources or commercial software such as *Rocky Path*, *Design's Paint*, *Drawfile*, and so on. Make sure that any entries using commercial software are accompanied by details of the software and/or hardware used to enable us to reproduce your pictures.

The competition will be judged by a panel including representatives from *Wangston House*, *Compendium* and independent programmers.

All entries should be accompanied by your name, address, telephone number if possible and details of software used to create the picture if relevant.

You can use any *Compendium* machine:

MS, ILS, CTR, Plus4 or VisiD, to create your pictures. Any artwork using non-MS compatible machines will be awarded a prize of equal value to the MS 2000 Mouse. In addition, ALL WINNERS and runners up will have their pictures published in the newsletter and displayed on *Compendium*.

The closing date for entries is January 19th 1986.

The theme of your picture is entirely up to you. Film and TV characters, still life, abstract — whatever takes your fancy. The judges will be looking for a combination of artistic ability, ingenuity, and programming expertise if relevant.

Don't be discouraged from entering by the quality of the examples shown here — remember, the judges will be looking for originality and style as much as technical skill. May the best artists win! ☐

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RESEARCH AND ANALYSIS

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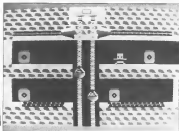
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his quest for the clues, and there are dozens of diagrams and bundles of papers trying to trip him. Once he's found them all, he must search through the covers, using on the evidence and avoiding the traps. He has to find a secret key before proceeding to the Courtroom and naming the guilty man!

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Previous winners

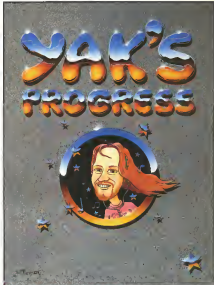
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